

REMARKS

The Examiner is thanked for the thorough examination of the present application. The Office Action, however, tentatively rejected all examined claims 1-30. In response, Applicant submits the foregoing amendments and the following remarks. Specifically, claims 1, 2, 6, 11, 13, 15, 16, 18 and 20-30 have been amended. No new matter is added by these amendments. In short, the amendments to the independent claims render the rejections moot. Notwithstanding, Applicant sets for the following additional distinguishing remarks.

37 CFR 1.105 – Request for Information

In response to the request for information, Applicant notes that the inventor is no longer an employee of the Assignee, and therefore was not available to respond to this request for information. Consequently, the requested information is not presently known by the Applicant and cannot be readily obtained.

Information Disclosure Statement

Applicant acknowledges the Office Action's statement that the Taiwan Office Action, which was submitted in an information disclosure statement has been placed in the file, but not substantively considered. Applicant understands that this non-English language document will not be considered, and merely submitted the document to fully comply with Applicant's duty of candor.

Objections

The Office Action objected to the term 'IC' in claims 11, 13, 15, 16, 18 and 20-30. In response, these claims have been amended to spell out 'integrated circuit,' in place of the acronym IC. Accordingly, the foregoing amendments render the objections moot and the objections should be withdrawn.

Rejections under 35 U.S.C 103(a)

All claims stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Peachev-Kountz (U.S. Pat. No. 6,463,345 B1) in view of Baseman (U.S. Pat. No. 6,671,673 B1). Applicant respectfully requests reconsideration and withdrawal of this rejection for at least the following reasons.

MPEP 2141.02 states:

THE CLAIMED INVENTION AS A WHOLE MUST BE CONSIDERED

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.

DISCOVERING SOURCE/CAUSE OF A PROBLEM IS PART OF "AS A WHOLE" INQUIRY

A patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the 'subject matter as a whole' which should always be considered in determining the obviousness of an invention under 35 U.S.C. § 103.

Further, MPEP 2142 reads:

Legal Concept of Prima Facie Obviousness

The examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. To establish a prima facie case of obviousness, three basic criteria must be met. *First, there must be some*

*suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. **The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.***

Furthermore, MPEP 2143.01 reads:

THE PRIOR ART MUST SUGGEST THE DESIRABILITY OF THE CLAIMED INVENTION

“There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teaching of the prior art, and the knowledge of persons of ordinary skill in the art.” *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998)(The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50USPQ2d 1161 (Fed. Cir. 1999).

In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the purposed substitution, combination, or other modification.” *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

In this case, Peachev-Kountz discloses an ATP (Available To Promise) system, which is used for generating related data of demand management. The Baseman reference discloses a supply chain management and financial with a part of risk consideration. In the Baseman reference, risk includes foreign exchange risk, interest rate risk, political risk, catastrophe risk, business risk, counterparty risk, credit risk, and geographic risk. It is understood that the risk in the Baseman reference is very different

from that in the application. However, in the application, the risk means the probability that a demand to be cancelled. Consequently, the risk is fundamentally different.

Additionally, the Examiner asserts that Baseman discloses the demand planning process attempts to determine which customer demands to fulfill (and when) in the face of 'demand uncertainty' in the section of 'Extended Demand Planning' (Col. 8, line 42 to col. 9, line 17). In the Baseman reference, 'demand uncertainty' is only a general term describing a demand planning may face some criteria such as size and due date of the order, the strategic importance of the customer, the flexibility in the required due date, and penalties and discounts specified in the terms and conditions of the customer contract. No more detail is disclosed in the Baseman reference. It is clear that either the 'risk' or the 'demand uncertainty' is very different from the risk definition of the present application. Further, neither Peachev-Kountz nor Baseman contain any suggestion (express or implied) that they be combined, or be modified in the manner suggested.

Further still, as described, the prior art reference (or references when combined) must teach or suggest all the claim limitations in Legal Concept of *prima facie* Obviousness. In regard to claims 1 and 11, Peachev-Kountz and Baseman do not teach or suggest what the Office Action relies upon them as allegedly teaching. Peachev-Kountz and Baseman fail to disclose, suggest, or teach, *inter alia*, various features of the claimed embodiments.

Specifically, independent claims 1, 6, 11, 16, 21, and 26 recite:

1. A demand dispatching method, comprising the steps of:
receiving a first demand;
providing a risk database recording risk information for a first
demand, **wherein the risk information comprises a first**

percentage of a low risk part and a second percentage of a high risk part of the first demand, a first order rate for the low risk part, and a second order rate for the high risk part, wherein the high risk part has a higher probability than the low risk part to be cancelled;
dividing the first demand into a low risk demand and a high risk demand ***according to the first percentage of the low risk part and the second percentage of the high risk part***;
determining an expected quantity of a first fabrication; and
dispatching parts of the low risk demand and the high risk demand to the first fabrication according to the expected quantity, and the first order rate and the second order rate, wherein a first quantity of the low risk demand and a second quantity of the high risk demand are dispatched to the first fabrication, and the amount of the first quantity multiplied by the first order rate and the second quantity multiplied by the second order rate is equal to or greater than the expected quantity.

6. A demand dispatch system, comprising:
a risk database recording risk information for a first demand,
wherein the risk information comprises a first percentage of a low risk part and a second percentage of a high risk part of the first demand, a first order rate for the low risk part, and a second order rate for the high risk part, wherein the high risk part has a higher probability than the low risk part to be cancelled; and
an allocation planning module to receive the first demand, divide the first demand into a low risk demand and a high risk demand ***according to the first percentage of the low risk part and the second percentage of the high risk part***, determine an expected quantity of a first fabrication, and ***dispatch parts of the low risk demand and the high risk demand to the first fabrication according to the expected quantity, and the first order rate and the second order rate***, wherein a first quantity of the low risk demand and a second quantity of the high risk demand are dispatched to the first fabrication, and the amount of the first quantity multiplied by the first order rate and the second quantity multiplied by the second order rate is equal to or greater than the expected quantity.

11. A demand dispatching method in an IC foundry, comprising the steps of:
receiving a first demand for a first integrated circuit product;

providing a risk database recording risk information for a first demand, **wherein the risk information comprises a first percentage of a low risk part and a second percentage of a high risk part of the first demand, a first order rate for the low risk part, and a second order rate for the high risk part**, wherein the high risk part has a higher probability than the low risk part to be cancelled;
 dividing the first demand into a low risk demand and a high risk demand **according to the first percentage of the low risk part and the second percentage of the high risk part**;
 determining an expected quantity of a first fabrication; and
dispatching parts of the low risk demand and the high risk demand to the first fabrication according to the expected quantity, and the first order rate and the second order rate, wherein a first quantity of the low risk demand and a second quantity of the high risk demand are dispatched to the first fabrication, and the amount of the first quantity multiplied by the first order rate and the second quantity multiplied by the second order rate is equal to or greater than the expected quantity.

16. A demand dispatch system in an integrated circuit foundry, comprising:
 - a risk database recording risk information for a first demand for a first integrated circuit product, **wherein the risk information comprises a first percentage of a low risk part and a second percentage of a high risk part of the first demand, a first order rate for the low risk part, and a second order rate for the high risk part**, wherein the high risk part has a higher probability than the low risk part to be cancelled; and
 - an allocation planning module to receive the first demand, divide the first demand into a low risk demand and a high risk demand **according to the first percentage of the low risk part and the second percentage of the high risk part**, determine an expected quantity of a first fabrication, and **dispatch parts of the low risk demand and the high risk demand to the first fabrication according to the expected quantity, and the first order rate and the second order rate**, wherein a first quantity of the low risk demand and a second quantity of the high risk demand are dispatched to the first fabrication, and the amount of the first quantity multiplied by the first order rate and the second quantity multiplied by the second order rate is equal to or greater than the expected quantity.

21. A method of integrated circuit product manufacturing, comprising the steps of:
receiving a first demand for a first integrated circuit product;
providing a risk database recording risk information for a first demand, **wherein the risk information comprises a first percentage of a low risk part and a second percentage of a high risk part of the first demand, a first order rate for the low risk part, and a second order rate for the high risk part**, wherein the high risk part has a higher probability than the low risk part to be cancelled;
dividing the first demand into a low risk demand and a high risk demand **according to the first percentage of the low risk part and the second percentage of the high risk part**;
determining an expected quantity of a first fabrication;
dispatching parts of the low risk demand and the high risk demand to the first fabrication according to the expected quantity, and the first order rate and the second order rate, wherein a first quantity of the low risk demand and a second quantity of the high risk demand are dispatched to the first fabrication, and the amount of the first quantity multiplied by the first order rate and the second quantity multiplied by the second order rate is equal to or greater than the expected quantity;
receiving a purchase order for the first integrated circuit product;
and
manufacturing the first integrated circuit product corresponding to the purchase order in the first fabrication.

26. An integrated circuit product produced by the process of:
receiving a first demand for a first integrated circuit product;
providing a risk database recording risk information for a first demand, **wherein the risk information comprises a first percentage of a low risk part and a second percentage of a high risk part of the first demand, a first order rate for the low risk part, and a second order rate for the high risk part**, wherein the high risk part has a higher probability than the low risk part to be cancelled;
dividing the first demand into a low risk demand and a high risk demand **according to the first percentage of the low risk part and the second percentage of the high risk part**;
determining an expected quantity of a first fabrication;
dispatching parts of the low risk demand and the high risk demand to the first fabrication according to the expected quantity, and the first order rate and the second order rate, wherein a first quantity of the low risk demand and a second quantity of the high risk demand are

dispatched to the first fabrication, and the amount of the first quantity multiplied by the first order rate and the second quantity multiplied by the second order rate is equal to or greater than the expected quantity;
receiving a purchase order for the first integrated circuit product;
and
manufacturing the first integrated circuit product corresponding to the purchase order in the first fabrication.

(Emphasis added). Simply stated, the independent claims of this application patently define over the combination of cited art for at least the reason that the cite art fails to disclose at least the features emphasized above.

First, although the Examiner asserts that the Peachev-Kountz discloses the invention substantially as claimed, Applicant cannot find any evidence from the Office Action's citations to the cited art that can substantially disclose all limitations as claimed. Accordingly, Applicant respectfully requests the Examiner to provide appropriate and accurate citations or explanations for how Peachev-Kountz discloses the various claimed features emphasized above.

In addition, in the application, a specific demand is divided into a low risk demand and a high risk demand according to the risk information of the specific demand. Parts of the low risk demand and the high risk demand are dispatched to a fabrication according to order rates corresponding to the low and high risk demands. Nowhere in the Peachey-Kountz or Baseman references does it teach or suggest these claimed features.

For at least these reasons, the rejections should be withdrawn.

As a separate and independent basis for the patentability of all claims, Applicant submits that the combination of Peachey-Kountz and Baseman is improper and

therefore does not render the claims obvious. In this regard, the Office Action combined Baseman with Peachey-Kountz to reject the claims on the solely expressed basis that “it would have been obvious ... [and the] motivation for doing so would have been to dispatch quantities based on the level of risk demand.” (see e.g., Office Action, p. 7, lines 1-2)

This rationale is both incomplete and improper in view of the established standards for rejections under 35 U.S.C. § 103.

In this regard, the MPEP section 2141 states:

The Supreme Court in KSR reaffirmed the familiar framework for determining obviousness as set forth in *Graham v. John Deere Co.* (383 U.S. 1, 148 USPQ 459 (1966))... As reiterated by the Supreme Court in KSR, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows:

- (A) Ascertaining the differences between the claimed invention and the prior art; and
- (B) Ascertaining the differences between the claimed invention and the prior art; and
- (C) Resolving the level of ordinary skill in the pertinent art.

In addition:

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
- (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention and
- (D) Reasonable expectation of success is the standard with which obviousness is determined.

Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

As reflected above, the foregoing approach to obviousness determinations was recently confirmed by the United States Supreme Court decision in *KSR INTERNATIONAL CO. V. TELEFLEX INC. ET AL.* 550 U.S. 1, 82 USPQ2d 1385, 1395-97 (2007), where the Court stated:

In *Graham v. John Deere Co. of Kansas City*, 383 U. S. 1 (1966), the Court set out a framework for applying the statutory language of §103, language itself based on the logic of the earlier decision in *Hotchkiss v. Greenwood*, 11 How. 248 (1851), and its progeny. See 383 U. S., at 15–17. The analysis is objective:

“Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” *Id.*, at 17–18.

Indeed, as now expressly embodied in MPEP 2143, “[t]he **key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious**. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit.” (*Emphasis added, MPEP 2143*). “Objective evidence relevant to the issue of obviousness **must** be evaluated by Office personnel.” (MPEP 2141). “The key to supporting any rejection under 35 U.S.C. 103 is the **clear articulation of the reason(s) why the claimed invention would have been obvious**. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 **should be made explicit**. The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that ‘[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational

underpinning to support the legal conclusion of obviousness.” (MPEP 2141).

Simply stated, the Office Action has failed to at least (1) ascertain the differences between and prior art and the claims in issue; and (2) resolve the level of ordinary skill in the art. Furthermore, the alleged rationale for combining the references is merely an improper conclusory statement that embodies clear and improper hindsight rationale. For at least these additional reasons, Applicant submits that the rejections of all claims are improper and should be withdrawn.

CONCLUSION

For at least the foregoing reasons, all claims are in condition for allowance. If the Examiner has any questions or comments regarding Applicants' response, the Examiner is encouraged to telephone the undersigned.

No fee is believed to be due in connection with this submission. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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